



IOWA

PROFILES IN soil health

Don McCool
Bayard, Iowa
2,000 acres
Crops: Corn/Soybeans
Planting: No-till
Cover: Cereal Rye



unlock the
SECRETS
IN THE
SOIL

Cover Crops Provide Immediate Soil Benefits for No-tiller.

After five years researching cover crops, Guthrie County farmer Don McCool aerial seeded cereal rye on 420 acres on his cropland near Bayard on Sept. 9, 2013, and he saw immediate soil health benefits, including more root mass to feed microorganisms.

"Just look at the roots and the earthworms after you've tried cover crops and no-till, and you can see what they're doing for soil health," says McCool. "Anytime you dig soil up and it's crumbly and has lots of worms in it, you know you're making your soil healthier. You just won't find worms in a spade full of soil of tilled soil like you will in no-till and cover crop field. To me that's the soil telling us that it's healthier."

McCool, who farms in partnership with his brother Jeff, has no-tilled for about 15 years, and has been reading



Don McCool planted soybeans into last year's standing cereal rye cover crop, and he's already thinking about his next cover crop.

about cover crops for the past five years.

"We made the decision to try cover crops five years ago, but we wanted to study them—read and go to meetings and field days to learn how to do it right," he says. "We think we've done our homework. This practice will definitely build organic matter. Maybe you can't do it overnight,

but you sure can do it faster with cover crops. If you think about what an alfalfa field does for the soil, when you rotate alfalfa with corn and soybeans, you can relate to what a cover crop might do for a field."

Check on financial incentives

McCool says financial incentives are still available for cover crops, and that's another reason to plan ahead now for next year's cover crop. "There's enough good publicity about cover crops that the practice is going to grow fast, I think. It will be huge in the future, but I think you do need incentives to get people to try it at first," he says.

He says incentives allowed them to try things without the guarantee of a financial return. "I feel comfortable with cover crops but have concerns about whether we can always kill them on time. And a big concern is getting the corn planted on time—we do have to wait for the herbicides to kill the cover crops before we can plant," he said. "I'm on a three-year program. With that much time, we can look at all the costs and see the variability and make an educated decision on whether to continue."

McCool and his brother are using cover crops on about 20 percent of their corn and soybean acreage. He's started discussions on cover crops with landlords. "I want cover crops on rented land even though it may benefit the owner more than me, because I want the owner to know that I'm going to take care of the land. The landowners have been receptive to that," he says.

Look at inputs, other species

"So far I've stayed the same on inputs, other than the cover crop seed," McCool says. "We sidedress N. We don't put any nitrogen on in the fall and we use a liquid fertilizer. We apply less nitrogen than most, but we're trying to apply even less nitrogen now."

He says that means down the road, he might be looking at other species. "In front of corn we need



McCool and NRCS Soil Conservationist Jason Hart (right) examine soil with deep cereal rye roots that are helping to feed microorganisms.

to find something other than cereal rye, because waiting in the spring to plant can be a killer," he says.

"And we have to come up with a better way to farm intensively and still protect and improve our soils. We just can't do it with straight corn and beans. I'm hoping cover crop mixes will be the key to that."

One thing McCool did this year was cut and bale about 50 acres of cereal rye on flatter fields just before spraying them and planting to soybeans. He got a mixture of last year's cornstalks and rye in the bales. "I think I could do it on sloping ground and still have very effective cover, especially with the soil-holding power of the roots," he says.

The McCools have 150 head of Angus/Tarentaise cows. "We'll grind these bales up and put bran cake with them and see if the cows eat it," Jeff says.

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